

ABSTRACT OF THE DISCLOSURE

5 The present invention is a thermally reversible
stimulus-sensitive gel or gelling copolymer radioisotope
carrier that is a linear random copolymer of an [meth-
]acrylamide derivative and a hydrophilic comonomer, wherein
the linear random copolymer is in the form of a plurality of
linear chains having a plurality of molecular weights
greater than or equal to a minimum gelling molecular weight
10 cutoff. Addition of a biodegradable backbone and/or a
therapeutic agent imparts further utility. The method of
the present invention for making a thermally reversible
stimulus-sensitive gelling copolymer radionuclide carrier
has the steps of: (a) mixing a stimulus-sensitive reversible
15 gelling copolymer with an aqueous solvent as a stimulus-
sensitive reversible gelling solution; and (b) mixing a
radioisotope with said stimulus-sensitive reversible gelling
solution as said radioisotope carrier. The gel is enhanced
by either combining it with a biodegradable backbone and/or
20 a therapeutic agent in a gelling solution made by mixing the
copolymer with an aqueous solvent.